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CLAIMS

1.- A remote activation mechanism for equipment hold down and release, characterised by being composed of a fixed base; a disk parallel to the fixed base with capacity to rotate; a segmented ring mounted in between said fixed base and said disk; an helical torsion spring mounted around said segmented ring, having one of its ends joined to said fixed base and the other to said disk; a retainer to attach the equipment, that passes through said fixed base and has means to be blocked by said segmented ring; a disk blocking system; and a disk liberation system; in which said disk can potentially rotate from a position in which said helical torsion spring is loaded hugging radially said segmented ring maintaining the segments as close as possible, up to a position in which said helical torsion spring is unloaded having a bigger internal diameter, allowing the ring segments move radially away; and in which said retainer is maintained in position by said segmented ring when said segmented ring is in its closed configuration, and said retainer is released when said segmented ring is in opened configuration with its segments separated; and in which said disk blocking system is composed of a trigger capable of not allowing the rotation of said disk; and in which said disk liberation system consist of an actuator capable of activating the trigger and liberate said disk, discharging said helical torsion spring.

2.- A mechanism as in claim 1, further comprising a housing with a cover supporting said disk

using an intermediate layer of low friction material, and with a lateral enclosure around said helical torsion spring and fixed to said fixed base and said cover.

3.- A mechanism as in claim 1, wherein said
5 fixed base has radial slopes, where the segments of the ring rest, towards the outside to facilitate the segments separation when the helical torsion spring is discharged, and has radial keys located between consecutive slopes that separates and maintain segments in position.

10 4.- A mechanism as in claim 1, wherein said disk has a supplement provided with a central cylindrical shape that maintains the internal diameter of the segmented ring.

5.- A mechanism as in claim 1 and 3, wherein
15 said ring is divided in at least two, and preferably three, segments, that in their closest position are maintained separated one from other by the keys of the fixed base.

6.- A mechanism as in claim 1 wherein said
20 trigger consist of at lease one, and preferably two, rollers or balls that are located in diametrically opposed positions of the cage of the housing, disposed between disk and crown, both with possibility of partial rotation, having said disk and said crown the
25 corresponding grooves in the surfaces in contact with the cage, sized as to allow the rollers or balls to be partially inserted, having the crown the possibility of turn around the cage between a position in which the crown grooves and disk grooves are not faced and the

rollers or balls are partially inserted in the disk blocking it, and another position in which the crown grooves and the disk grooves are faced permitting the rollers or balls to be inserted in the crown grooves
5 liberating the disk and allowing disk rotation.

7.- A mechanism as in claim 1 and 6, further comprising one or several springs located between the crown and the housing that pushes the crown towards the position in which the crown grooves are not faced to the
10 cage slots, and also shape memory alloy wires that when activated operate on the crown opposite to the said spring, having possibility of contraction as to move the crown up to facing its grooves to the cage slots.

8.- A mechanism as in claim 1, wherein the
15 actuator consist of a shape memory alloy wire that provides a contraction when heated up to its transformation temperature, being heated by conventional means such as increase of ambient temperature, use of heaters, etc...

20 9.- A mechanism as in claim 1 and 8, wherein said shape memory alloy wire are heated by passing electrical current through it, being provided the necessary electrical isolation.

10.- A mechanism as in claim 1, wherein said
25 crown and said disk are provided with means, as holes or anchors, as to allow their connection with external actuation means to move pieces to the armed position, providing also the necessary accessibility by means of holes and slots in the housing and in the cover.

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-23-

11.- A mechanism as in all previous claims, wherein said segmented ring is a segmented nut, and said retainer is a bolt able to be threaded in the segmented nut when the nut is closed with the segments as close as possible.

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